

Alloy Designation	
EN	CuNi1Co1Si
DIN	CuNi1Co1Si
UNS	C70350 ASTM B422
JIS	/

Chemical Composition		
Ni	1.0 - 2.5	%
Co	0.9 - 2.0	%
Si	0.5 - 1.2	%
Mg	max. 0.04	%
Cu	Remainder	

Characteristics
C70350 is a precipitation-hardening Cu–Ni–Si Corson alloy with uniformly distributed silicide precipitates that deliver high strength, good electrical conductivity and excellent resistance to thermal stress-relaxation, making it a viable alternative to C70250 high-strength tempers. It also provides good yield and fatigue strength, strong elastic properties, excellent formability and bending performance, along with solid ductility, durability and corrosion resistance.

Main Applications
Connectors
Terminals
Relays & Switches
Heat dissipation plates for smartphone

Physical Properties (Reference values at room temperature)		
Density	g/cm ³	8.82
Electrical conductivity	IACS%(20°C)*	45
Modulus of elasticity	KN/mm ²	120
Coefficient of thermal expansion	10 ⁻⁶ /K	17.6
Thermal conductivity	W/(m*K)	200

*value for the lowest temper class

Mechanical Properties						
TEMPER	Tensile Strength Mpa	Yield Strength Mpa	Elongation %	Hardness HV	Bending Test(90°) GW BW	
TM02	675 - 780	-	min. 5	160 - 210	1	1.5
TM04	750 - 850	-	min. 4	220 - 280	2	2
TM06	810 - 920	-	min. 1	240 - 300	2.5	2.5

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